tags in logistics work, "Nikkei BP Mook, All of wireless IC tag", Nikkei BP Inc., April 20, 2004, p.70-71

SUMMARY OF INVENTION

[Technical Problem]

[0005]

In the technique of Patent Literature 1 described above, a technique for reading ID information of an RFID tag attached to a container when a forklift inserts a fork-shaped arm into the container is disclosed. Further, the same technique is also described in Non-Patent Literature 1.

However, when the RFID tag is not attached to the cargo itself, appropriate management cannot be performed.

[0006]

Embodiments of the present invention seek to provide a cargo management device, a cargo management method and a program that can solve the above-described problem.

[Solution to Problem]

[0007]

According to a first aspect of the present invention, a cargo management device includes a cargo management unit configured to determine whether or not a first identifier (ID) is detected by a first antenna provided at a cargo gripping mechanism of a transport vehicle, wherein a first transmission device is provided at a predetermine position of the transport vehicle so as to receive reflected waves of a radio signal transmitted from the first antenna, and the first ID is transmitted from the first transmission device in response to reception of the reflected waves; and a transport state

determination unit configured to determine that a cargo to which no cargo ID transmission device is attached is being transported when the first ID is detected.

[0008]

According to a second aspect of the present invention, a cargo management method includes determining whether or not a first ID is detected by a first antenna provided at a cargo gripping mechanism of a transport vehicle, wherein a first transmission device is provided at a predetermine position of the transport vehicle so as to receive reflected waves of a radio signal transmitted from the first antenna, and the first ID is transmitted from the first transmission device in response to reception of the reflected waves; and determining that a cargo to which no cargo ID transmission device is attached is being transported when the first ID is detected.

[0009]

There is also disclosed a program that causes a computer of a cargo management device to function as: a cargo management means that determines whether or not a first ID is detected by a first antenna provided at a cargo gripping mechanism of a transport vehicle, wherein a first transmission device is provided at a predetermine position of the transport vehicle so as to receive reflected waves of a radio signal transmitted from the first antenna, and the first ID is transmitted from the first transmission device in response to reception of the reflected waves; and a transport state determination means that determines that a cargo to which no cargo ID transmission device is attached is being transported when the first ID is detected.

[Advantageous Effects of Invention]

[0010]

According to embodiments of the present invention, it is possible to manage a cargo to be transported by a transport vehicle without obtaining hydraulic pressure information of a

according to a situation in which the first ID is detected by each of the first antenna and the second antenna.

4. The cargo management device according to claim 1 or 2, wherein the cargo management unit is further configured to:

determine whether or not a second ID transmitted from a second transmission device is detected by the first antenna based on reception of the radio signal transmitted from the first antenna, the second transmission device being provided in the transport vehicle in advance to be located near the first antenna when the cargo gripping mechanism is lifted up to a predetermined height, and

determine a carrying-in source or a carrying-out destination of the cargo according to a situation in which the first ID and the second ID are detected by the first antenna.

5. A cargo management method, comprising:

determining whether or not a first ID is detected by a first antenna provided at a cargo gripping mechanism of a transport vehicle, wherein a first transmission device is provided at a predetermine position of the transport vehicle so as to receive reflected waves of a radio signal transmitted from the first antenna, and the first ID is transmitted from the first transmission device in response to reception of the reflected waves; and

determining that a cargo to which no cargo ID transmission device is attached is being transported when the first ID is detected.